(19) World Intellectual Property Organization International Bureau





(43) International Publication Date 8 November 2001 (08.11.2001)

PCT

(10) International Publication Number WO 01/83932 A1

(51) International Patent Classification⁷: 17/14, 43/10

E21B 7/20.

(21) International Application Number: PCT/GB01/01512

(22) International Filing Date:

2 April 2001 (02.04.2001)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

0010378.8

28 April 2000 (28.04.2000) GI

- (71) Applicants (for all designated States except US): BBL DOWNHOLE TOOLS LIMITED [GB/GB]; Suite 12, McNeill Business Centre, Greenbank Crescent, East Tullos, Aberdeen AB12 3BG (GB). BAIN, James [GB/GB]; 20 West Park Crescent, Inberbervie, Montrose DD10 0TX (GB). HAITES, Binnert, Ruerd [CA/GB]; 32 Cairn Road, Bieldside, Aberdeen AB15 9AL (GB).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): TULLOCH, Rory, McCrae [GB/GB]; 20 Ashley Park North, Aberdeen AB10 6SF (GB).

(74) Agent: KENNEDYS PATENT AGENCY LIMITED; Floor 5, Queens House, 29 St Vincent Place, Glasgow G1 2DT (GB).

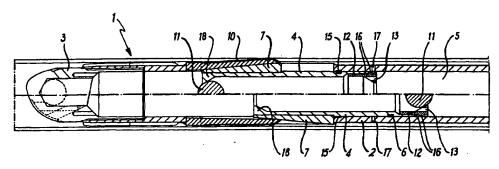
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published:

with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: EXPANDABLE APPARATUS FOR DRIFT AND REAMING A BOREHOLE



(57) Abstract: An expandable reamer shoe is provided for use with expandable casing in a borehole. The reamer shoe has a number of reaming members in the form of blades which remain closed against the body of the shoe when inserted through casing, and can then be expanded to underream below the casing. Additionally, the expandable reamer shoe is made substantially of a drillable material so that the borehole can be extended beyond the point reached by the expandable reamer shoe.

01/83932 A1



United States Patent and Trademark Office

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450
Alexandria, Vignus 22313-1450
www.itepio.gov

FILING OR 371 (c) DATE APPLICATION NUMBER FIRST NAMED APPLICANT ATTY. DOCKET NO./TITLE

10/667,515

09/23/2003

Dae-Ho Choo

8054L-206 T (LW7010US-1)

CONFIRMATION NO. 1451

OC000000018324011

22150 F. CHAU & ASSOCIATES, LLC 130 WOODBURY ROAD WOODBURY, NY 11797

Date Mailed: 03/20/2006

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 02/10/2006.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

BERHANU GIRUM PTOSS (703) 305-0677

OFFICE COPY